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ABSTRACT

An evaluation was conducted on the effectiveness of Energy and Man's Environment (EME), a nonprofit energy organization which conducts energy programs in 15 states around the United States. Three research questions were addressed: (1) Who is the consumer of EME workshops and the user of EME materials? (2) How do participants view EME workshops. Specifically, how are the presentations and content perceived? (3) What impact does participation in EME workshops have on educators? Survey instruments (sample included in appendix) were mailed to national (N=1188) and regional (N=1399) samples representing individuals participating in implementation, make-and-take, and college credit workshops during 1982. Response rates were 454 national (39 percent) and 539 regional (38 percent). Results are reported and discussed in three sections corresponding to the three research questions posed. Among the results presented are those indicating that: a majority of EME participants are elementary school teachers; participants are typically very experienced educators and attend workshops on their own volition; participants regard workshop presentations as clear, well organized/prepared, effective, relatively value free, and interactive; that subject matter is informative, useful, and practical; and that approximately half of workshop participants develop/compile other energy materials to supplement ones received. (JN)

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ENERGY & MAN'S ENVIRONMENT

IMPACT STUDY

SUMMARY OF RESULTS

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INTRODUCTION

Since it's origin in 1972, Energy and Man's Environment grew and emerged as a leader in energy education. A considerable amount of money and effort was expended in it's development and program implementation. The corporation attracted the attention of educators at all levels and from various organizations interested in the promotion of energy education throughout the United States. Both the sponsors and the users of EME services and materials were interested in knowing what impact, if any, occurred as a result of their efforts. A growing interest existed in trying to determine the impact on teachers and administrators who had participated in the EME programs. Local school districts wanted to know if the materials were acceptable to educators. State departments of education wanted to know how the program was working as they considered recommending it's use to school districts within their states. Sponsors wanted to know if their funds were being expended in a productive manner.

While several well constructed and implemented studies were conducted to provide answers to these important questions, they happened in isolation. As a consequence the data gained could not be generalized to EME as a whole. Moreover, this fragmentaion led to the unnecessary duplication of effort.

This current study represents the first step toward a coordinated evaluation effort. It is anticipated that the study will be replicated in future years with a view to building a solid data base on which EME can substantiate the claims of effectiveness it is making both to sponsors and to adoptors of the EME program.

RESEARCH QUESTIONS

While the questions of interest to EME are many, the current study is limited to the following:

1. Who is the consumer of EME workshops and the user of EME materials?

2. How do participants view EME workshops? Specifically, how are the presentation and the content perceived?

3. What impact does participation in EME workshops have on educators?

METHODS AND PROCEDURES

Instrumentation

Due to the lack of appropriate valid instrumentation, EME undertook the development of a survey specifically for this study. After establishing the general research questions of interest, more specific evaluation questions were identified. These questions were then translated into survey format by the external evaluator and typed to produce the first draft of the survey. This draft was read by six external readers and modifications were made to produce a working draft.

At a national meeting, the working draft was examined and discussed by EME regional coordinators and a number of industry sponsors. The purpose here was to eliminate redundant or poor items, identify any omissions and correct any poorly worded or ambiguous statements.

Following the rigorous examination of the instrument, a pilot version was completed by a group of teachers (N=30) from Odessa, Texas who had recently undergone EME training. These participants were asked indicate any problems they encountered (ambiguous or misleading questions, missing responses or unclear statements. etc.) while completing the survey in a final attempt to construct a valid and reliable survey instrument. Only one item was slightly modified as a result of the comments received from the pilot teachers. At this time, therefore, the survey was considered to be in it's final form (Appendix A) and ready for distribution.

Sampling Procedures

Due to the limited scope of this study the actual research population was restricted to those who had participated in implementation, make and take and college credit workshops during the 1982 calendar year. In actuality, the sampling frame was limited to those identified workshops for which registration lists were available. While this was less than 50% of the eligible workshops conducted, this is not expected to have caused biased results as there is not reason to suspect that mailing lists were not available on any systematic basis. It should be noted at this point that the New Hampshire regional sample was drawn from 1981 workshop participants due to the lack of available mailing lists of those who attended in 1982. Additionally, as the participant list from El Paso did not provide workshop detail, it is not clear exactly what this data represents. From within the identified sampling frame, participants were randomly drawn for inclusion in the study in numbers proportional to the number of people trained in each EME region. In this way a stratified random sample with 18 representative subgroups was identified. The intended and actual sample sizes by region are presented in Table 1. Not included in this table, but included in the study, were 19 of 30 participants in the Odessa, Texas pilot group and 22 of 38 participants in EME sessions held in Colorado Springs (special interest group).

The workshops from which the samples were drawn are summarized by region in Table 2. As can be seen, 451 workshops with an average length of 5.72 hours were conducted. The total number of participants was 12,621 for an average of 27.98

TABLE 1: Intended and Actual Sample Sizes By Region

REGION	National Sample Intended	National Sample Actual	Regional Sample Intended	Regional Sample Actual
Colorado	64	66	66	64
Dallas	32	32	60	60
El Paso	71	75	75	71
Idaho	84	84	84	84
Iowa	141	143	143	141
Kansas	124	125	125	124
Kansas City	94	95	95	94
Missouri	56	56	60	56
Montana	40	42	60	58
Nevada	67	68	68	67
New Hampshire	3	3	60	60
Oregon	133	135	195	132
St. Louis	45	46	60	59
Tucson	24	24	60	60
Utah	58	60	60	58
Vermont	10	10	60	60
Washington	91	94	94	91
Wyoming	43	43	60	60
TOTAL	1261	1201	1485	1425

TABLE 2: Descripton of Sampling Frame

REGION	Number of Sessions	Average Length	Number of Participants	Ave # Part.	% of Population
Colorado	20	10.55 hrs	660	33.0	5.5%
Dallas	3	5.66 hrs	316	105.3	2.5%
El Paso	32	6.40 hrs	753	23.5	6.0%
Idaho	20	2.30 hrs	845	42.3	6.7%
Iowa	59	8.10 hrs	1436	24.3	11.4%
Kansas	47	6.20 hrs	1251	26.6	9.9%
Kansas City	35	7.00 hrs	946	27.0	7.5%
Missouri	15	8.00 hrs	557	37.1	4.4%
Montana	15	3.70 hrs	418	27.9	3.3%
Nevada	22	4.70 hrs	683	31.0	5.4%
New Hampshire	2	2.00 hrs	30	15.0	0.2%
Oregon	69	1.80 hrs	1952	28.3	15.5%
St. Louis	13	5.20 hrs	464	35.7	3.7%
Tucson	10	2.50 hrs	242	24.2	1.9%
Utah	23	7.90 hrs	599	26.0	4.7%
Vermont	11	3.20 hrs	96	8.7	0.8%
Washington	40	5.50 hrs	940	23.5	7.4%
Wyoming	15	10.30 hrs	433	28.9	3.4%
TOTAL	451	5.72	12,621	27.98	99.9%

participants per session.

The sample surveyed was reasonable evenly distributed across the size and type of community in which they were located (Table 3) with the exception of the large urban sector. This is as may

Table 3: Percentage of Participants by Size and Type of Community

Community Size	Number	Percentage
500,000 +	28	6.3
100,000 to 500,000	81	18.2
50,000 to 100,000	83	18.6
25,000 to 50,000	67	15.0
5,000 to 25,000	109	24.4
less than 5,000	78	17.5
TOTAL	446	100%

be expected given the EME impact area.

In terms of the type of workshop attended, by far the largest number of participants in this sample (70%) had attended an "Implementation" workshop. A little over 26% had participated in "Make and Take" workshops, while the remaining 3% had attended workshops for college and university credit.

Data Collection

The survey form, along with a stamped addressed return envelope and cover letter (see sample, Appendix B) which was individualized for each region was mailed in May 1983. The cut off date for returns was set at July 8th, allowing a full six weeks for data return.

Data Return

The number of survey returns for the national and regional samples are described in Table 4. Excluded from the number of participants surveyed column are 23 subjects for which the form was undeliverable at the address given. In addition to these, seven surveys were returned by subjects who claimed no knowledge of the workshop. Thirty three surveys were received after the established deadline.

At 39% for the national sample and 38% for the regional sample, the levels of return for a survey of this nature are considered to be exceptionally high and a positive testimony to the support given to EME by it's workshop participants. Having said this, all results of this study should be interpreted in light of this return.

Organization and Analysis of Data

Upon return, survey forms were organized by state. Data was then transferred by keypunch to IBM cards ready for analysis using the Statistical Package for the Social Sciences. In order to provide answers to the research questions, the data was first treated descriptively by total sample and then by each EME region. A secondary analysis examined the effects of potential intervening variable on subject responses.

TABLE 4: Number and Percentage of Data Returns By Region

Region	National Sample Surveyed	Returned	%	Regional Sample Surveyed	Returned	%
Colorado	64	32	50%	64	38	59%
Dallas	32	10	32%	60	16	27%
El Paso	71	28	40%	71	31	44%
Idaho	84	28	33%	84	29	35%
Iowa	141	69	49%	141	70	50%
Kansas	124	23	19%	124	23	19%
Kansas City	94	33	35%	94	33	35%
Missouri	56	24	43%	56	25	45%
Montana	40	20	50%	58	29	50%
Nevada	67	25	37%	67	25	37%
New Hampshire	3	2	66%	60	13	22%
Oregon	132	53	40%	132	56	42%
St. Louis	45	13	29%	59	17	29%
Tucson	24	10	42%	60	20	33%
Utah	58	28	49%	58	28	48%
Vermont	10	6	60%	60	28	47%
Washington	91	32	35%	91	32	35%
Wyoming	43	18	42%	60	26	43%
TOTAL	1188	454	39%	1399	539	38%

RESULTS

For the sake of clarity in this summary document, survey results are presented in a stepwise manner. Where appropriate, questions are posed and answers provided. Discussion is kept to a minimum. The results are divided into three major sections which correspond to the three parts of the survey and to the research questions posed.

PART ONE: BACKGROUND INFORMATION

This section of the results describes the typical EME workshop participant in terms of the variables identified and provides information about the first research questions posed: Who is the consumer of EME Workshops and the user of EME materials?

1. What positions do workshop participants typically hold?

By far the greatest percentage (64%) of EME participants are elementary school teachers. Junior/Senior high and middle school teachers comprise approximately 25% while administrators constitute about 3% of participants. Approximately 8% of respondents did not fall into any of the categories provided. A list of the vocations of these participants is presented in Appendix C.

2. From what subject matter backgrounds to workshop participants come?

Respondents who taught at the junior and senior high school level were asked to indicate their subject area. The results were as one might expect. By far the largest number of teachers (29%) were from a science background. Other notable groups were

Social Studies (11.2%), Language Arts (10.4%), Math (8.8%), Home Economics (7.2%) and Librarians (4.8%). All other categories were of unsufficient numbers to report (see Appendix D). The interesting thing about this data is the number of subject areas impacted by EME training. While one might expect science and social studies teachers to get involved in this area, it is gratifying to know that teachers from a variety of disciplines are interested in energy education.

3. How experienced are EME workshop participants?

The EME participant is, without question, the more experienced professional. Seventy two percent of respondents had held their current position for over four years and 36% for over ten years. The distribution was even more skewed in terms of overall experience. It was determined that over 90% had four or more years in education and that 63% had ten or more years.

4. Do participants voluntarily attend EME workshops?

The answer to this very important question is a resounding yes! Of the sample surveyed, 93% of participants attended workshops on their own volition. Only 7% were "recruited". At least going into the workshop then, it would appear that the content and format of the session had appeal to it's audience.

5. Do particpants receive credit (district inservice or recertification) for attending EME workshops?

The distribution on this item was very even. Fifty six percent of respondents attended their workshops without receiving credit of any kind. We can assume that the remaining 44%

received crdit of the type specified.

6. Do participants expend personal funds to attend EME workshops?

Of the sample surveyed, 26% indicated that they had expended personal funds to attend the workshop.

7. Did participants include energy education as part of their curriculum prior to attending an EME workshop?

The inclusion of energy education in their curriculum (prior to the EME workshop) by participants is described in Table 5. As can be seen, the respondents were near normally distributed (with a slight skew to the right) on this issue.

TABLE 5:
The Inclusion of Energy Education in the Curriculum Prior to the Workshop

	Never	Seldom	Occassionally	Often
N	54	130	189	72
%	12.1	29.2	42.5	16.2

8. How important did participants view energy education to be?

Energy education was viewed as highly important (68%) and important (30%) by 98% of the sample. These data strongly indicate a positive attitude going into the EME workshop.

TABLE 6: Importance of Energy Education

	Not Very Important	Mildly Important	Important	Very Important
N	0	12	135	307
%	0	2.6	29.7	67.6

9. Do participants believe that public education can make a difference in energy conservation and the use of alternative sources?

Not only did the respondents express an extremely positive attitude toward the importance of energy education but they also strongly felt that public eductaion could influence energy conservation and use by a margin of 98.5% to 1.5%. This result is certainly far removed from the scepticism one is accustomed to seeing of late!

10. Were the participants concerned about energy usage in the U.S.?

The level of concern about energy use in the United States was enormous. A full 99% of the respondents thought is was important or highly important to be concerned. Only 1% felt that it was mildly important. No respondents felt that this issue was unimportant.

SUMMARY - PARTICIPANT DEMOGRAPHICS AND ATTITUDES

- The majority of EME workshop participants (64%) are elementary school teachers. Junior/senior high teachers comprise 25% while approximately 3% are administrators.
- Workshop participants come from a variety of disciplines.
- Workshop participants are typically very experienced educators.
- For the most part (93%), consumers attend EME workshops on their own volition.
- Approximately one half of participants receive some type of credit for attending EME workshops.
- Approximately one quarter of attendants expend personal funds in conjunction with EME workshops.
- Workshop participants are typically very aware and concerned about energy problems.
- Participants view energy education as important and believe that schools can make a difference in this regard.

PART TWO: THE WORKSHOP

While many EME trainers include an evaluation of the sessions they conduct as a part of the workshop itself, this data has not previously been summarized on a national level. It was felt important, therefore, to include a section in the survey which addressed the way in which participants viewed the workshops they attended. More specifically how the workshop presentation and content were perceived.

1. How did participants view the workshop presentation?

Included in the survey were items related to seven dimensions of workshop presentation. The results of these items are presented in Table 7. There is no question that the manner in which the energy information was presented was well received. All but one item received a mean rating of over 4 on a 5 point scale. Presenters were obviously highly effective in their styles, clear, well organized and used appropriate media. Slightly weaker but well above average were the degree to which the presentations were value free, the length of the presentation itself and the provision for audience input. In many cases, of course, the length of the presentation is beyond the control of the presenter. Given this, it appears that EME trainers are making excellent use of the time available.

TABLE 7: Participant Opinions of the Workshop Presentation

The Workshops:	x Rating	Very Much So		Average		Not At All
		5	4	3	2	1
1. Was Clear	4.43	56.1%	31.8%	11.4%	0.2%	0.5%
2. Was Well Organized and Prepared	4.53	62.9%	28.5%	7.9%	0.4%	0.2%
3. Used Appropriate Media	4.47	59.8%	29.2%	9.1%	1.6%	0.2%
4. Had An Effective Style	4.31	49.8%	36.5%	11.4%	3.0%	0.2%
5. Was Value Free	3.71	23.8%	35.3%	31.4%	7.1%	2.4%
6. Provided An Opportunity For Input	4.11	42.7%	33.9%	17.3%	3.7%	2.3%
7. Was A Good Length For The Content Presented	4.19	45.6%	33.9%	15.5%	4.1%	0.9%

2. How do participants view the workshop content?

Five items relative to this question were included in the survey. The data for these items are summarized in Table 8. It is evident that the information presented in EME workshops is received equally as well as the way in which it was presented. All items received a mean rating of over 4.3 on a 5 point scale. This has to be considered outstanding support on the part of respondents. They felt the workshops to be highly informative, useful, practical, interesting and most importantly, well worth the time they spent.

TABLE 8: Participant Opinion of the Workshop Content.

The Workshop:	x Rating	Very Much So		Average		Not at All
		5	4	3	2	1
1. Was Informative	4.54	64.6%	26.7%	7.4%	1.1%	0.2%
2. Was Useful	4.32	50.8%	34.2%	12.1%	2.5%	0.4%
3. Was Practically Oriented	4.31	50.2%	33.9%	12.9%	2.9%	---
4. Was Interesting	4.43	57.9%	30.9%	7.9%	2.7%	0.7%
5. Was Worth The Time Spent	4.42	58.9%	27.9%	10.8%	1.3%	1.1%

3. How do participants perceive EME workshops relative to others they have attended?

Whereas the previous items addressed the workshop sessions in detail, an item to assess the "overall" impressions of the EME inservice was included in the survey. The results on this item were very much in line with the previously described. Seventy two percent of respondents rated the EME workshop better than others they had attended, 26% rated it about the same. Only 2.3% felt that the EME session was worse than others they had attended. This must be considered outstanding testimony to the quality of EME workshops.

SUMMARY - OPINIONS ABOUT THE WORKSHOPS

Participants regard EME workshop presentations as:

- Clear
- Well organized and prepared
- Effective
- Relatively value free
- Good in terms of length
- Interactive
- Using appropriate media

Participants regard EME subject matter as:

- Informative
- Useful
- Practically oriented
- Interesting
- Well worth the time spent

PART THREE: IMPACT

The last part of the survey dealt with the impact that the EME workshop had on it's participants. In a sense, this is really the bottom line in terms of the effectiveness of the EME effort. The results of this section pertain to Section 3 of the survey sheet. As this section was "for teachers only" only teacher responses areincluded in Section 3 analysis. In this way, erroneous responses are eliminated.

1. <u>After attending the EME workshop, do participants include energy concepts as part of their program of instruction</u>?

The results for this item are contrasted with those gained from a previous item which asked, "PRIOR to attending the workshop, how often did you include energy concepts in your program of instruction?" and are presented in Table 9. As can be seen, attendance at the workshop caused a swing toward increased energy education in an already positive population.

TABLE 9: The Inclusion of Energy Concepts in the Program of Instruction

		Never	Seldom	Occasionally	Often
Prior to Workshop	N	43	124	172	65
	%	10.6	30.7	42.6	16.1
Following Workshop	N	15	33	206	144
	%	3.0	8.3	51.8	36.2

The percentage of respondents including energy concepts "occasionally" or "often" rose from 59% to 88%. The percentage of "never" dropped from 10.6% to 3%.

2. Are workshop participants actually using EME or energy materials in their classrooms?

Table 10 depicts the incidence of usage of EME and other energy related materials in the classrooms of workshop participants. It is evident that energy materials are widely used in classrooms. EME materials seem to be slightly more used than other materials.

TABLE 10: Use of Energy Materials

		Never	Seldom	Occasionally	Often
EME Materials	N	42	46	214	94
	%	10.6	11.6	54.0	23.7
Other Materials	N	41	82	219	55
	%	10.6	20.7	55.2	13.9

3. What are the reasons why some of the respondents do not include energy concepts as a part of their curriculum?

The responses to this item are summarized in Table 11.

TABLE 11: Reasons for not Including Energy Concepts in the Curriculum.

REASONS	N	%
Not prepared enough	22	5.3%
Don't have time	47	11.4%
Don't have resources	29	7.0%
Schedule or position won't allow it	38	9.2%
Not an interest	3	0.7%
Will in the future	36	8.7%

The most common reasons given were the lack of time and that the schedule or position would not allow it. Both of these reasons are essentially beyond the control of the participants.

Approximately 5% of the respondents felt that they were not prepared enough and/or they did not have the resources. Less than 1% said that it was simply not an interest. Almost 10% of respondents indicated that they would include energy concepts sometime in the future.

4. Do participants share the information/materials they received with others?

Over 80% of respondents indicated that they had shared what they had received. The implication here is that EME is reaching an audience far larger that its direct contacts.

5. Do participants develop/compile additional energy related materials after attending EME workshops?

The distribution on this item was very evenly split. Fifty two percent of respondents indicated that they had supplemented their materials with others, 48% had not.

6. Do participants typically refer others to EME energy education workshops?

Fifty-five percent of the respondents to the current survey indicated that they had recommended the EME workshop to other education professionals.

7. Do EME workshops contribute to the professional growth of participants?

With 95% of the returns responding affirmatively to this item, it would appear that the answer to this question is an unequivocal yes.

8. Do workshop participants, follow up EME sessions with other energy related activities?

Whereas 29.4% of attendants had pursued other energy related activities since their EME workshop, 70.6% had not. These data are somewhat ambiguous as many reasons other than lack of interest exist. It is, for example, highly likely that other energy related activities were not accessible to this sample or that simply not enough time had elapsed.

9. Do EME workshops increase participants awareness of the energy usage?

Even in this already aware and concerned group, 86% felt that the workshop had increased their awareness of the energy problem. Sixty three percent of respondents indicated that the session had directly affected their outlook toward energy usage.

SUMMARY - IMPACT

- After attending an EME workshop, 9% of participants incorporate energy education into their program of instruction.
- Teachers widely use energy materials. EME materials are slightly more used than other materials.
- Eighty percent of participants share the information and materials they received with others.
- Approximately half of the workshop attendants develop or compile other energy materials to supplement the ones they received.
- Fifty-five percent of workshop participants refer other professionals to EME sessions.
- Ninety-five percent of participants feel that EME workshops contribute to their professional growth.
- EME workshops increase the awareness of 86% of participants and directly affect the outlook toward energy use of 63% of participants.

APPENDIX A

Survey Instrument

Part I: Background Information

POSITION

Check (✓) one

1 ( ) Teacher, Elementary
2 ( ) Teacher, Middle School
3 ( ) Teacher, Junior High-indicate subject area _____
4 ( ) Teacher, Senior High-indicate subject area _____
5 ( ) Building Level Administrator/Coordinator
6 ( ) District Level Administrator/Coordinator
7 ( ) Other-please specify _____

EXPERIENCE

1. Number of years in current position _____(years)
2. Number of years in public/private education _____(years)

COMMUNITY SIZE/TYPE

Check (✓) one

1 ( ) Inner City-500,000 plus
2 ( ) Large Urban-100,000 to 500,000
3 ( ) Suburban-50,000 to 100,000
4 ( ) Urban-25,000 to 50,000
5 ( ) Small Urban-5,000 to 25,000
6 ( ) Rural, less than 5,000

ENERGY WORKSHOP

Check (✓) one

1. Did you VOLUNTARILY attend the Energy workshop? Yes ( ) No ( )
2. Did you receive CREDIT (college, recertification or district in-service credit) for attending the workshop? Yes ( ) No ( )
3. Did you PERSONALLY expend any funds in connection with the workshop for materials, credit or a registration fee? Yes ( ) No ( )
4. PRIOR to attending the workshop, how often did you include energy concepts in your program of instruction?

1( ) Never 2( ) Seldom 3( ) Occasionally 4( ) Often

PERSONAL

	Very Important 4	Important 3	Mildly Important 2	Not Very Important 1
1. How important do you believe it is for people to be concerned about the amount of energy used in the U.S.?	( )	( )	( )	( )
2. How important do you believe Energy Education is?	( )	( )	( )	( )

3. Do you believe that public education can make a difference in energy conservation and the use of alternate energy sources? Yes ( ) No ( )

Part II: The Workshop

We are interested in your opinions of the EME sponsored workshop that you attended. We realize that the workshop may have been several months ago. Please try to reflect your impressions of the workshop in all the items you can. If you do not feel comfortable in providing an accurate reflection, circle the question mark (?).

	Can't Remember	Circle One: very much so		Aver.		not at all
1. Was Clear	?	5	4	3	2	1
2. Was well organized and prepared	?	5	4	3	2	1
3. Used appropriate media	?	5	4	3	2	1
4. Had an effective style	?	5	4	3	2	1
5. Was value free (offered both sides to an argument)	?	5	4	3	2	1
6. Provided an opportunity for input	?	5	4	3	2	1
7. Was a good length for the content presented	?	5	4	3	2	1

part II: cont.

THE WORKSHOP CONTENT:	Can't Remember	Circle One: very much so		Aver.		not at all
1. Was informative	?	5	4	3	2	1
2. Was useful	?	5	4	3	2	1
3. Was practically oriented	?	5	4	3	2	1
4. Was interesting	?	5	4	3	2	1
5. Was worth the time I spent	?	5	4	3	2	1

Relative to other workshops I have attended, I would rate this workshop overall .....

3 ( ) Better
2 ( ) Average
1 ( ) Worse
( ) Can't Remember

Part III: Impact

TO BE COMPLETED BY
TEACHERS ONLY

PROGRAM USE

I. Since attending the workshop, have you	Never 1	Seldom 2	Occass. 3	Often 4
a. included energy concepts in your program of instruction?	( )	( )	( )	( )
b. used EME energy materials?	( )	( )	( )	( )
c. used other energy materials?	( )	( )	( )	( )

If you ARE NOT including energy concepts as a part of your curriculum, indicate why. (check (✓) all those that apply.)

- I don't feel prepared enough ( )
- I don't have time ( )
- I don't have the resources ( )
- My schedule or position will not allow it ( )
- It is simply not an interest of mine ( )
- I will teach energy education sometime in the future ( )

	Check (✓) one YES	NO
2. I shared the energy education materials/information I received with others.	( )	( )
3. I developed/compiled additional energy education materials.	( )	( )
4. I have referred other person(s) to EME Energy Education workshops.	( )	( )

PERSONAL

1. The workshop contributed to my personal/professional growth.	( )	( )
2. Since the workshop, I have participated in other energy related activities.	( )	( )
3. The workshop increased my awareness of the energy problem .	( )	( )
4. My outlook toward energy useage has changed since the workshop.	( )	( )

THANK YOU VERY MUCH FOR YOUR COOPERATION IN THIS EXTREMELY IMPORTANT MATTER.

APPENDIX B

Cover Letter

Energy & Man's Environment
Educational Programs for Energy Literacy

Dr Edward Dalton
PRESIDENT

Dear Educator:

During the past year you attended an energy education program either conducted or supported by Energy & Man's Environment, (EME). EME, as you may recall, is a nonprofit educational organization dedicated to promoting energy literacy.

In our efforts to maintain and improve our energy education materials and training services, we need your help. As a former participant, you can analyze our efforts and give us your opinions regarding our program services and materials. A questionnaire has been developed by an external evaluation firm for this purpose.

Would you please answer the questions on the enclosed questionnaire and return it in the addressed, stamped envelope to the evaluator? Your responses, along with those from your colleagues throughout our 17-state geographic region will then be compiled and utilized to improve our organization.

Your help in this important study is greatly appreciated. Thank you for your cooperation.

Sincerely,

4980 West Amelia Earhart Drive • Salt Lake City, Utah 84116 • (801) 539-1406

APPENDIX C

CODES FOR PARTICIPANTS OTHER THAN THOSE LISTED

01 PE Elementary
02 Librarian
03 College Student
04 Dir. of Rel. Ed.
05 Teacher of Bible School
06 Speech Pathologist
07 Secial Ed.
08 Counselor
09 Sponsor (Elec. Util. Emp.)-area safety chair person
10 Consultant
11 College Professor (Sci. Ed.)
12 Principal
13 Media Coordinator, Secretary, comm. School Coord.
14 Title I, aide to Title I
15 Naturalist
16 Coordinator for TAG
17 Sub. Teacher
18 School Social Worker
19 University level coord.
20 K-12 Resource
21 Teacher/resource person
22 Elem. Church School
23 Speech therapist

APPENDIX D

CODES FOR PARTICIPANT JUNIOR/SENIOR HIGH TEACHER SUBJECT AREAS

01 Science & Physics, Biology, Chem., Phys. Sci. Life Science, Geology & Earth Science.

02 Spec. Ed., Learning disabilities

03 Lang. Arts, Reading & Eng. Lang., Drama

04 Business Ed.

05 PE & Dr. Ed., Health

06 Industrial Arts

07 Home Economics

08 Math

09 Health Occupation

10 Social Studies

11 Sociology

12 Environmental Studies

13 Librarian

14 Ind. Ed.

15 Government

16 Oceanography